

CLAIM AMENDMENTS

Please amend the claims as follows:

1. (Currently amended) A client-server system for transferring a database from a server to a client over the Web, the system comprising:
 - a server connectable to the Web including a Web server ~~a network, the server having a memory accessible thereto~~;
 - a source database of a first database type accessible to the server having metadata and database data stored therein, the server associating a structure object with the metadata and a data object with the database data ~~the source database having metadata associated therewith identifying a structure and at least one field of the source database~~;
 - a client automatically downloaded from the server and automatically installed in a Web browser connectable to the Web ~~network~~ for communication with the Web server, the client connectable to a database system ~~having a memory accessible thereto~~ for storing a copy of the source database in a target database of a second database type;
 - a graphical user interface operable at the client for causing the generation and population of the target database, initiation of a database transfer via the graphical user interface requiring only identifying the source database, identifying the target database, and use of a selector to initiate the database transfer;
 - the server having a programming interface including an interface corresponding to each of a plurality of known databases stored thereon, the server programmed to automatically identify and load the interface corresponding to the source database for accessing the source database and retrieving the metadata and at least a portion of the database data and storing the retrieved metadata in the structure object and the database data in the data object ~~at least one data object~~;
 - the server sending the structure object metadata and the at least one data object to the client over the Web via a Web protocol over standard Web channels such that firewall modification is not required at the client;
 - the client including a processor for ~~receiving and/or~~ automatically downloading and installing an ~~the~~ interface corresponding to the ~~source target~~ database, ~~and~~ receiving the structure object metadata and the at least one data object from the server, ~~and generating creating the target database and storing a copy of~~

~~the source database~~ using the metadata, and populating the target database ~~copy of the source database with the~~ database data retrieved from the data object including mapping data types from the source database of the first type to that of the target database of the second type ~~data from the at least one data object~~; and wherein

the client-server system provides for the transfer of the [[a]] source database of the first database type to the client and target database of the second database type across various database types, vendors and operating systems without user interaction following initiation of the transfer via the graphical user interface, the system being automated such that no programming or scripting is required for initiating or carrying out the transfer and the user is not required to have any knowledge of the source database apart from a name thereof. ~~without development effort.~~

2. (Currently amended) The client-server system according to claim 1 wherein the programming interface includes a data access application having which includes an executable program for generating and executing queries to the source database to extract database structure information from ~~for retrieving the metadata and the data therefrom~~ and store[[ing]] the database structure information in the structure object, the database structure information including at least one of:

a database identifier for the source database;

a list of tables stored in the source database;

a list of columns for each table; and

a data type for each column.

~~retrieved data in at least one data object.~~

3. (Currently amended) The client-server system according to claim 1 wherein the structure object and the data object are serialized prior to being transmitted to the client. ~~metadata includes at least one of:~~

~~a database identifier;~~

~~a list of tables stored in the database;~~

~~a list of columns for each table; and~~

~~a data type for each column.~~

4. (Currently amended) The client-server system according to claim 1 wherein the source database of the first database type and the target database of the second database type are both of the same database type. ~~is a relational database.~~
5. (Original) The client-server system according to claim 4 further comprising a database server coupled to the database.
6. (Cancelled)
7. (Original) The client-server system according to claim 6 wherein the programming interface is a Java DataBase Connectivity (JDBC) component.
8. (Original) The client-server system according to claim 5 wherein the database server further comprises a Relational DataBase Management System (RDBMS).
9. (Original) The client-server system according to claim 1 wherein the client further comprises a Relational DataBase Management System (RDBMS).
10. (Cancelled)
11. (Currently amended) The client-server system according to claim 1 ~~claim 10~~ wherein the client includes a Java applet ~~[[is]]~~ downloadable from the server and automatically installed on ~~[[to]]~~ the client.
12. (Original) The client-server system according to claim 1 wherein the database to be copied is identified in a request from the client using a Uniform Resource Locator (URL).
13. (Cancelled)
14. (Cancelled)
15. (Cancelled)

16. (Currently amended) The client-server system according to ~~claim 15~~ claim 1 wherein the target database is populated in an order corresponding to any table dependencies. ~~web server serializes the database object prior to the transfer thereof to the client.~~

17. (Original) The client-server system according to claim 1 wherein the server further comprises a request processing application for validating client access to a requested database or portion thereof.

18. (Currently amended) The client-server system for transferring a database from a server to a client over the Web according to claim 1 wherein the data object is transferred via a Web protocol for ensuring data encryption over the network and firewall penetration at the client. ~~The client server system according to claim 14 wherein the web server communicates with the client via Hypertext Transfer Protocol (HTTP).~~

19. (Currently amended) The client-server system according to claim 1 further comprising an incremental transfer process for maintaining synchronization between the source database and the target copy of the source database residing on the client system.

20. (Currently amended) The client-server system according to claim 1 further comprising a Web based utility for client viewing and modifying the database data in a source database, the utility operable across database types, vendors and operating systems.

21. (Currently amended) The client-server system according to claim 1 further comprising a data verification application process ~~process~~ for verifying the integrity of the data objects transferred to the client over the network.

22. (Currently amended) A client-server system for transferring a database from a server to a client over the Web, the system comprising:
_____ a server connectable to the Web including a Web server;

a source database of a first database type accessible to the server having metadata and database data stored therein, the server associating a structure object with the metadata and a data object with the database data;

a client automatically downloadable from the server and installable in a Web browser connectable to the Web for communication with the Web server, the client connectable to a database system for storing a copy of the source database in a target database of a second database type;

the client configured for receiving a programmatically generated HTTP transfer request for transferring the source database from the server to the client, the client automatically initiating said transfer upon receipt of the transfer request;

the server having a programming interface including an interface corresponding to each of a plurality of known databases stored thereon, the server programmed to automatically identify and load the interface corresponding to the source database for accessing the source database and retrieving the metadata and at least a portion of the database data and storing the retrieved metadata in the structure object and the database data in the data object;

the server sending the structure object and the data object to the client over the Web via a Web protocol over standard Web channels such that firewall modification is not required at the client;

the client including a processor for automatically downloading and installing an interface corresponding to the target database, receiving the structure object and the data object from the server, creating the target database using the metadata, and populating the target database with the database data; and wherein

the client-server system provides for the transfer of the source database of the first database type to the client and target database of the second database type across various database types, vendors, and operating systems.

~~A data access application for use in transferring a database from a server to a client, the database having data stored therein and associated metadata identifying a structure and at least one field of the database, the data access application comprising an executable program for:~~

~~loading an interface corresponding to the database, the interface being selected from a plurality of interfaces stored on the server for use with various types of databases;~~

~~retrieving from the database the metadata and at least a portion of the data stored therein;~~

~~storing the metadata in a structure object;~~

~~converting the retrieved data to Java objects and storing the Java objects in at least one data object;~~

~~transferring the metadata and the at least one data object to the server for transfer thereof to the client;~~

~~wherein the data access application operates without development or user interaction across database types, vendors and operating systems.~~

23. (Cancelled)

24. (Original) The data access application according to claim 22 further comprising a Java DataBase Connectivity (JDBC) interface for accessing the database and retrieving therefrom the metadata and at least a portion of the data stored therein.

25. (Currently amended) A method for transferring a database from a server to a client over the Web, the method comprising the steps of:

at a server connected to the Web and including a Web server:

storing a programming interface corresponding to each of a plurality of known databases on the server;

providing a source database of a first database type having metadata and database data stored therein, ~~the source database having metadata associated therewith identifying a structure and at least one field of the database;~~

causing the display of a graphical user interface at the client, the graphical user interface operable for causing the generation and population of a target database of a second database type upon initiation of a database transfer via the graphical user interface, the target database for storing a copy of the source database at the client;

receiving a request for transferring the source database from the server to the client;

loading the programming interface corresponding to the source database;

accessing the source database and retrieving the metadata and at least a portion of the database data stored therein;

storing the database ~~retrieved~~ data in at least one data object;

sending the metadata and the at least one data object to a client over the Web via a Web protocol over standard Web channels such that data encryption over the network and firewall modification at the client is not required;

the server operating on the source database across various database types, vendors and operating systems without user interaction following initiation of the transfer via the graphical user interface ~~requiring development effort~~;

at a client:

~~receiving and/or automatically~~ downloading and installing [[the]] a programming interface corresponding to the target-source database;

receiving the metadata and the at least one data object;

generating [[a]] the target ~~copy of the source~~ database according to the metadata;

populating the target ~~copy of the source~~ database with the database data retrieved from the at least one data object; and wherein

the method including transferring the source database from the server to the client without user interaction following initiating the transfer via the graphical user interface, the method requiring no manual software installation of the client and no programming or scripting for initiating or carrying out the transferring of the source database from the server to the client.

26. (Original) The method of claim 25 further comprising:
at the server:

storing the metadata in a structure object;

storing the structure object and the at least one data object in a database object;

serializing the database object; and

transferring the database object to the client.

27. (Original) The method of claim 25 further comprising:
at the server:
comparing a size of the database object to a maximum size prior to the transfer thereof to the client; and
if the size of the database object is greater than a maximum size, segmenting the database object and separately transferring each of the segments to the client.
28. (Original) The method of claim 27 further comprising:
at the server:
generating an auxiliary object for storing the segments of the database object exceeding the maximum size prior to the transfer thereof to the client.
29. (Currently amended) The method of claim 25 further comprising:
at the server:
querying the source database for retrieving the metadata and the database data stored therein.
30. (Cancelled)
31. (Original) The method of claim 25 further comprising:
at the server:
validating a client for authorization to access the source database or a portion thereof prior to accessing the source database.
32. (Currently amended) The method of claim 25 further comprising:
maintaining synchronization between the source database and the ~~copy~~ the target database thereof residing on the client.
33. (Original) The method of claim 25 further comprising:
providing a Web based utility for client viewing and modifying the source database.

34. (New) The client-server system for transferring a database from a server to a client over the Web according to claim 1 wherein the data object is encrypted via a secure Web protocol prior to transmission thereof to the client.

35. (New) The client-server system for transferring a database from a server to a client over the Web according to claim 1 wherein the graphical user interface includes a pull-down menu for identifying the source database, the pull-down menu displaying an identifier for each of a plurality of databases available at the server for transfer to the client.

36. (New) The client-server system for transferring a database from a server to a client over the Web according to claim 1 wherein the system is configured as a stand-alone product operable for completing the transfer process without the use of additional applications.

37. (New) The client-server system for transferring a database from a server to a client over the Web according to claim 1 wherein the transfer process requires only minimal effort on the part of a user for initiating the transfer and no action thereafter.

38. (New) The client-server system for transferring a database from a server to a client over the Web according to claim 1 wherein the user can initiate a database transfer without any knowledge or skill related to the databases or database programming.

39. (New) The client-server system for transferring a database from a server to a client over the Web according to claim 1 wherein the structure object and the data object are segmented as required prior to transmitting the same to the client for limiting the size of the individual transmissions.